

Champlain Canal Waterford Locks  
Immediately N. of Lock No. 2 of  
the New York State Barge Canal;  
0.1 mile S. of U.S. Route 4  
Waterford, Saratoga County,  
New York

HAER No. NY-14

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PHOTOGRAPHS  
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
Office of Archeology and Historic Preservation  
National Park Service  
U.S. Department of the Interior  
Washington, D.C. 20240

Location: Immediately north of Lock No. 2 of the New York State Barge Canal  
0.1 mile south of U.S. Route 4  
Waterford, Saratoga County, New York  
Latitude: 42° 47' 38" N. Longitude: 73° 41' 00" W.

Date of Construction: 1824-26

Engineer: Erie Canal engineering staff, under John B. Jervis, et al.

Present Owner: State of New York

Present Use: Spillway for surplus water, New York State Barge Canal.

Significance: The Champlain Canal was built to link Lake Champlain with the Erie Canal and with the tidewater of the Hudson River.

The Canal is presently part of the New York State Barge Canal system, the most extensive in the United States. When the Barge Canal was built, c. 1911-15, most of the original alignment of the Erie and Champlain Canals was abandoned, although it was followed generally. The Champlain portion of the Barge Canal, which accommodates tug and barge traffic, for much of its route at the lower end is the canalized Hudson River.

## PART I. HISTORICAL INFORMATION

### A. History of the Champlain Canal and the Waterford Locks.

The construction of the Champlain Canal was first considered in 1792 when the Inland Navigation Company was chartered for the purpose of creating a waterway between Lake Champlain and the Hudson River. Although the company spent \$100,000 on the project, no canal was built. The British civil engineer, Sir Marc Isambard Brunel (1769 - 1849, father of Isambard Kingdom Brunel) is known to have been associated with the Champlain Canal plans while he was working in America from 1793 to 1799. (Richard Beamish. Memoir of the Life of Sir Marc Isambard Brunel, Civil Engineer, 2nd ed. London: Longman, 1862.)

In 1816 the Canal Law and the plans for the Erie Canal included recommendations and specifications, as well, for the Champlain Canal, or Northern Canal. A group of commissioners including Stephen Van Rensselaer, DeWitt Clinton, Myron Holley, Samuel Young, and Joseph Ellicott were appointed "to consider, devise, and adopt plans to effect means of communication between the navigable waters

of the Hudson River and Lake Erie, and the said navigable waters and Lake Champlain." (Whitford, vol. 1, p. 410) Throughout the discussions and legislative activity of 1816-1817, the canals were treated together as one issue; the route of the Champlain Canal would appease the constituents of the northeastern part of the state who might otherwise object to Erie Canal expenditures.

The advantages of connecting Lake Champlain with the Hudson River were summarized by the commissioners in an 1817 report to the State Assembly. The Champlain Canal "would save vast sums in the price of transportation; it would open new and increasing sources of wealth; it would divert from the province of Lower Canada, and turn to the south, the profits of the trade of Lake Champlain; and, by imparting activity and enterprize [sic] to agriculture, commercial and mechanical pursuits, it would add to our industry and resources, and thereby augment the substantial wealth and prosperity of the State." (Assembly Journal, 1817, p. 589, in Whitford, p. 411)

Work began in 1817 at the northern or upper end of the canal, near Whitehall at the lower end of the lake, concurrently with the start of work on the Erie Canal. Construction progressed southward and was completed by 1822 to Waterford, the lower terminal, where the canal entered the Hudson by means of a lateral cut with three locks. A low dam across the Hudson provided a still pool into which the boats were locked. Whitford described the facility:

The works consisted of a dam and a sloop lock. The masonry of the lock was completed in 1822, but a section of the dam had been left open in order to discharge the water of the river while the other works were being constructed. While the contractors were closing this gap, a heavy freshet occurred which undermined and carried away about one hundred and twenty feet of the unfinished dam. The high water continued so long that it was impossible to do any further work that season. In the spring of 1823 this breach was repaired, but during the season another one occurred in the old portion of the dam. In the following spring this breach became enlarged by the action of heavy freshets and the commissioners were in a quandry as to what they should do. Finally an agreement was made with certain responsible individuals that they should repair the dam at their own expense and risk. If the dam, as repaired, should withstand the fall, winter and spring floods and at the subsiding water in the spring should remain entire and undamaged, the contractors were to receive the sum of \$25,750, otherwise nothing. The dam was repaired upon these conditions and in the spring of 1825 it had withstood the test so well that it was accepted by the commissioners." (Whitford, pp. 416-417)

The locks were finally placed in service by 1826.

Below the lateral cut, the Champlain Canal continued southward in a slightly westerly direction crossing the Mohawk River on slack-water near its mouth, below Cohoes Falls, and formed a sharply acute angle in its junction with the Erie Canal at Juncta, due west of the Lower Sprout of the Mohawk River.

B. Alterations and Additions:

- 1842 Another lock on the main canal was built at Waterford.
- 1845 New gates were constructed on the guard locks.
- 1852 Lock No. 7 at Waterford was rebuilt, probably enlarged to accommodate tow boats.
- 1854 A contract was let to rebuild the three single locks on the Waterford side cut, and by
- 1856 three new combined locks were completed on the north side of the old side cut.
- 1862 A weighlock built this year at Waterford, was a significant improvement to the canal system.

A weighlock had been needed at Waterford as up to [1861] the only one available for weighing boats on the Champlain Canal was at West Troy on the Erie Canal. The Waterford side-cut had served as a convenient shunpike to any boats that were not bound for the Erie Canal, and consequently the State had been defrauded of a large percentage of its just tolls. (Whitford, p. 430)

It cost \$22,115.70 and relieved the congestion at the West Troy weighlock. It was enlarged in 1889.

- 1903 By means of a referendum, the Champlain Canal became part of the New York State Barge Canal System. Work began on the Barge Canal two years later and the Waterford Locks eventually became a spillway for its surplus water.

C. Sources of Information

1. Maps:

Map and Profile of the Champlain canal as Made from Lake Champlain to the Hudson River and Surveyed thence to the tide at Waterford. James Geddes, Engineer, 1820. Library of Congress, Geography and Map Division, Alexandria, Virginia.

Map of the Grand Erie Canal, with the Stage Roads from Albany to Buffaloe, and the distances between each Place, Drawn and engraved for the Tourist. S. Mahon, 1830. Library of Congress, Geography and Map Division, Alexandria, Virginia.

Map of Erie Canal. Holmes Hutchinson MS vol. 10, 1834. New York State Library, Albany.

Map of the Champlain Canal and its Connections. New York State Engineer and Surveyor. Annual Report for Year 1856. Albany, 1857. New York State Library, Albany.

State of New York Department of Public Works. Champlain Canal, Waterford to Stillwater, March 1, 1916. Sheet 1 of 2. Library of Congress, Geography and Map Division, Alexandria, Virginia.

## 2. Published Sources:

Shaw, Ronald E. Erie Water West: A History of the Erie Canal 1792 - 1854. Lexington: University of Kentucky Press, 1966.

Whitford, Noble E. History of the Canal System of New York, 2 vols. Albany: Brandow Printing Company, 1906.

Prepared by R. Carole Huberman  
Historian  
September 1970

## PART II. ENGINEERING INFORMATION

- A. Condition of fabric: The masonry walls and floors are in good condition; the wood lock gates and the hardware do not remain.
- B. Over-all dimensions: Approximately 15 feet by 150 feet in 3 levels.
- C. Construction: Random ashlar, gray stone, probably limestone.\* Stone stairways, 3 feet wide with 10-inch treads and 12-inch risers serve the different lock levels.
- D. Site: Neatly and pleasantly landscaped. typical of all State Barge Canal property.

Prepared by Richard J. Pollak  
Professor of Architecture  
Ball State University  
24 August 1969

\*"At the northern termination of the canal some limestone excavation would be necessary ..., but the material would be very useful in the construction of locks, nine of which were considered necessary between the Hudson and Lake Champlain." (Whitford, p. 412)

PART III. PROJECT INFORMATION

These records were prepared as part of the Mohawk-Hudson Area Survey, a pilot study for the Historic American Engineering Record which was established in 1969 under the aegis of the Historic American Buildings Survey. The project was sponsored jointly by the National Park Service (Historic American Buildings Survey), the Smithsonian Institution (National Museum of History and Technology), the American Society of Civil Engineers (National Headquarters and Mohawk-Hudson Section), and the New York State Historic Trust. The field work and historical research were conducted under the general direction of Robert M. Vogel, Curator of Mechanical and Civil Engineering, Smithsonian Institution; James C. Massey, Chief, Historic American Buildings Survey; and Richard J. Pollak, Professor of Architecture, Ball State University, Project Supervisor; and with the cooperation of the Department of Architecture, Rensselaer Polytechnic Institute.